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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,836	12/15/2004	Eiji Akahane	1602-0191PUS1	1303
2292	7590	10/18/2005	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			WEST, PAUL M	
			ART UNIT	PAPER NUMBER
			2856	
DATE MAILED: 10/18/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/517,836

Applicant(s)

AKAHANE ET AL.

Examiner

Paul M. West

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4/1,5/4/1,6, and 7 is/are allowed.
- 6) ☒ Claim(s) 2,3,4/2,5/4/2, and 8-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12152004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. As to claims 8, 9, and 10, the body of each claim appears to be drawn to an apparatus, while the preamble of each claim sets forth a "method." The wording and language of the body of each claim is inconsistent with the preamble.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2, 4/2, 5/4/2, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kataoka et al.
3. As to claim 2, Kataoka et al. teach a liquid fuel quantity measurement system comprising: a first container 9 for interiorly storing liquid fuel; pressure application means 13 for raising air pressure within said first container 9 by supplying air into said

first container; air pressure measurement means 15 for measuring the air pressure within said first container; a pipeline 37 through which said first container and said pressure application means communicate with each other; air volume measuring means 15 for measuring the volume of air supplied into said first container through said first pipeline by said pressure application means (Col. 8, lines 10-12); and arithmetic means 41 for calculating the volume of the liquid fuel within said first container 9 from both the volume of air measured by said air volume measurement means and a quantity of change in air pressure calculated from the air pressure within said first container measured by said air pressure measurement means 15 (Col. 8, lines 10-15).

4. As to claim 4/2, Kataoka et al. teach the air volume measurement means comprising raised pressure measurement means 15 and storage means 55 for storing a corresponding relationship (Col. 8, eq. 1) between the raised air pressure and the volume of air supplied into said first container.

5. As to claim 5/4/2, the air volume measuring means 15 is also used as the raised pressure measurement means.

6. As to claim 9, Kataoka et al. teach a liquid fuel quantity measurement system comprising: a first container 9 for interiorly storing liquid fuel; pressure application means 13 for raising air pressure within said first container 9 by supplying air into said first container; air pressure measurement means 15 for measuring the air pressure within said first container; and a pipeline 37 through which said first container and said pressure application means communicate with each other, wherein air is supplied into the first container through said pipeline by said pressure application means 13, both the

Art Unit: 2856

volume of the supplied air and a quantity of change in the air pressure within said first container 9 due to the air supply are detected or calculated (Col. 8, lines 10-12), and the volume of the liquid fuel within said first container is calculated from both the volume of the supplied air and the quantity of change in the air pressure (Col. 8, lines 10-15).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green.

9. As to claim 3, Green teaches a liquid quantity measurement system comprising: a first container 12 for interiorly storing liquid; a second container 14 connected with said first container 12; a second pipeline 16 through which said first container 12 and said second container 14 communicate with each other; feed means 18, 20 for feeding liquid within said first container into said second container through said second pipeline 16; detection means 36 for detecting the remaining quantity of the liquid within said second container; control means 42 for controlling said feed means, based on information from said detection means 36; and arithmetic means 42 for calculating the volume of liquid fuel fed into the second container from the first container (Col. 3, lines 44-46). Green does not teach calculating the volume of liquid left within the first

Art Unit: 2856

container from the number of times that liquid is fed from the first container into the second container, nor does Green teach the liquid being fuel. However it would have been obvious to one of ordinary skill in the art to determine how much liquid is left in the first container based on the amount of fuel that has been removed from it, because Green does teach removing known measured quantities of liquid from the first container and it would be advantageous to know how much liquid remains in order to prevent interruptions in dosing of the liquid during a measurement process. It would have been further obvious to one of ordinary skill in the art to use Green's system to measure quantities of fuel, because liquid fuel is commonly moved from one container to another where the exact measured quantities must be known, and Green's system provides an efficient, automated way to do this.

10. As to claim 10, Green teaches a first container 12 for interiorly storing liquid; a second container 14 connected with said first container 12; a second pipeline 16 through which said first container 12 and said second container 14 communicate with each other; feed means 18, 20 for feeding liquid within said first container into said second container through said second pipeline 16, wherein a predetermined quantity of liquid is fed from said first container into said second container through said second pipeline by said feed means (Col. 3, lines 49-52). Green does not teach calculating the volume of liquid left within the first container from the number of times that liquid is fed from the first container into the second container, nor does Green teach the liquid being fuel. However it would have been obvious to one of ordinary skill in the art to determine how much liquid is left in the first container based on the amount of fuel that has been

Art Unit: 2856

removed from it, because Green does teach removing known measured quantities of liquid from the first container and it would be advantageous to know how much liquid remains in order to prevent interruptions in dosing of the liquid during a measurement process. It would have been further obvious to one of ordinary skill in the art to use Green's system to measure quantities of fuel, because liquid fuel is commonly moved from one container to another where the exact measured quantities must be known, and Green's system provides an efficient, automated way to do this.

Allowable Subject Matter

11. Claims 1, 4/1, 5/4/1, 6, and 7 are allowed.
12. Claim 8 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

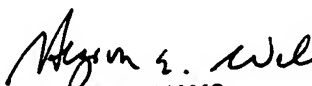
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul M. West whose telephone number is (571) 272-8590. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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